



# Aluminium-Zinc Coated Steel

## Aluzinc®/Galvalume® with Polysurlyn Moisture Barrier

### Description

Aluminium Zinc Coated Steel (Aluzinc®/Galvalume®) is a flat carbon steel product coated on both sides with an aluminium-zinc alloy and has factory applied Polysurlyn Moisture Barrier (PSMB) on the interior surface. The coating is composed of 55% aluminium, 43,4% zinc and 1,6% silicon and applied by means of a continuous hot dip galvanising process.

It can be used as insulation jacketing, ships interior cladding and sound proofing cabins. Due to its steel base material, it is suitable for fire hazardous area's in petrochemical plants.

A Polysurlyn Moisture Barrier on jacketing prevents moisture and corrosives in the insulation - which can cause galvanic, chemical and crevice\* corrosion - from coming into direct contact with the metal jacketing surface.

Polysurlyn Moisture Barrier is factory laminated to the interior surface of the jacketing. Polysurlyn Moisture Barrier is a co-extruded film of polyethylene and Surlyn® polymers with a total film thickness of 76 microns (3 mils). It exhibits a low water vapour transmission rate, virtually no pinholes. Polysurlyn Moisture Barrier does not decompose until 210°C, auto ignition temperature is above 315°C.

### Chemical composition of base steel (for DX51D + AZ to EN 10346 specification)

Chemical analysis	C	Mn	P	S	Si	Al	Nb	Ti	Fe	C	Mn
% by weight	≤0,120	≤0,60	≤0,100	≤0,045	≤0,50	...	...	≤0,300	remainder	≤0,120	≤0,60

Limits are weight percent maximum values unless shown as a range or stated otherwise.

The most commonly used steel quality in the insulation industry is commercial steel (CS according to ASTM/DX51D according to EN standards), which are lockforming grades.

The coating classification specifies the coating weight in mass per area including both sides.

### AZ150

Nominal coating weight of 150 g/m<sup>2</sup> including both sides; minimum mean mass in triple sampling. Coating thickness is approximately 20 microns.

### AZ185

Nominal coating weight of 185 g/m<sup>2</sup> including both sides; minimum mean mass in triple sampling. Coating thickness is approximately 25 microns.

### Applicable standard

ASTM A792 Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process

EN10346 Continuously hot-dip coated steel flat products

### Available dimensions

Available in thicknesses ranging from 0.016" (0.4 mm) to 0.024" (0.6 mm).

Standard widths are 36" (914 mm), 1 meter and 48" (1,219mm).

Other thicknesses and widths available on special order, minimums may apply.

## Mechanical properties

Thickness (mm)	Re (N/mm <sup>2</sup> )	Rm (N/mm <sup>2</sup> )	A80 (%)	Bending ratio
0,2-0,7	≥ 140	270-500	≥ 20	-
0,7-3			≥ 22	-

### Painting

A wide range of painting systems is available, such as acrylic, polyester and PvdF, either on the exterior surface or both surfaces. Painting enhances the emissivity of the jacketing which is advantageous for cold insulation systems.

### Tedlar®

Insu-W-Rapid BV can apply a grey Tedlar® films to the exterior surface of aluminium jacketing, as well as stainless steel. It is applied by bonding metal and Tedlar® film by means of permanent adhesives. The grey Tedlar® enhances the emissivity of the jacketing (>0,85), and blocks all of UV and visible light. It provides outstanding resistance against fading, cracking and corrosion. It is almost chemically inert and has excellent release properties.

### Embossing

Material can be stucco embossed up to 1250 mm(w) and 1,5 mm thickness. Stucco embossing reduces glare and makes the metal less susceptible to finger print staining and reduces the appearance of scratches.

### Profiling

The material can be profiled into corrugated sheets (e.g. 32x6 mm, 76x18 mm) or trapezoidal sheets (19x105, 35x207). Consult us for our range of profiles. 3/16" transverse and longitudinal corrugations, as well as micro-profiling, enhance strength, enabling the use of thinner base materials.

### Cut to length and rolled

All Insu-W-Rapid BV Jacketing products can be cut to length to customer specification. Rolling to a specified diameter is also possible.

### Packaging

Material supplied in coils or rolls. Coils packed on skids (eye to side) or pallets (eye to sky). Rolls packed eye to sky on pallets, or boxed per roll. Special packing available upon request.

*\*crevice corrosion:* a type of corrosion occurring on metal jacketing caused by differences in oxygen concentration in the electrolyte in adjacent regions of the material. These differences lead to a concentration cell and the region on the metal jacketing which is oxygen-starved is subject to corrosion.

Tedlar® and Surlyn® are DuPont Trade Marks.  
Aluzinc® is a Galvalange Sarl and SSAB Tunplatt AB Trade Mark.  
Galvalume® is a BIEC International, Inc. Trade Mark.

IMPORTANT: Insu-W-Rapid BV warrants that each of its products will be manufactured in accordance with the specifications in effect on the date of manufacture. We make no other warranties and expressly disclaim any warranties of merchantability or fitness for a particular purpose. If a product fails to meet this limited warranty, purchaser's sole and exclusive remedy is replacement of the product or, at our option, refund of the purchase price. No guarantees for completeness, accuracy or results is expressed nor implied. The suitability of the product to an intended use is the sole responsibility of the user. Since material choice and application method are beyond our control, we accept no liability for direct or consequential damages.

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